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## (54) DITHERING SCHEME USING MULTIPLEX ANTENNA FOR OFDM SYSTEM

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a dithering scheme using a multiple antenna for an OFDM system.  
**SOLUTION:** Dithering is performed by introducing slight variable frequency phase offsets, which are multiplexed excluding one of equivalent transmission OFDM signals, into all parts using phases of a rayleigh process generator. Therefore, whole effective channels become further dynamic and indicate spatial diversity to minimize the long phasing period in a phasing sub channel of an OFDM signal when a receiver is moving slowly or standing. To solve a further cancel problem, which occurs when two or more transmission antennas are placed in a line of sight (LOS) with a receiver and position at almost the same distance from the receiver, delay is intentionally introduced so as to allow a delay signal to be a reflection signal. This delay exerts no effect on the performance of an OFDM receiver as long as the delay is within a guard interval used in the OFDM process.



